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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MARCANTONI, PAUL D	

ART UNIT	PAPER NUMBER
1755	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,218	GOODWIN ET AL.	
	Examiner	Art Unit	
	Paul Marcantoni	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12,14-20 and 22* is/are pending in the application.

4a) Of the above claim(s) *20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12,14-20 and 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *12,14-20 and 22* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/15/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Applicant's 8/15/06 RCE and arguments have been fully considered but they are not persuasive.

Provisional Obviousness Type Double Patenting:

Claims 12, 14-19, and 22 are provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-11 of US Patent Publication 2005/0045067 A1 (10/960,150 Naji et al.). Although the conflicting claims are not indentical, they are not patentably distinct from each other because Naji et al. teach a composition comprising cement, plastizer such as melamine sulfonate formaldehyde (page 2 [0033]), cellulose (p.3) and gums [0039] in amounts overlapping the instantly claimed invention.

35 USC 112 Second Paragraph:

Claims 12, 14-19, and 22 rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

The rejection over "density modifier" has been withdrawn. The examiner will give this term its full breadth of scope and note that a multitude of components added can modify density by either increasing it or decreasing it. Applicants broad terminology reads upon either instance.

While claim 20 is non-elected, the term acrylic *based* polymers is indefinite. The applicants state they can amend their claim to –polymer comprising at least one acrylic

monomer--- to replace acrylic based monomer. The examiner will not agree to this change as it could be construed as a new matter addition. However, should applicants state for the record that by acrylic based monomer they mean exactly ---a polymer comprising at least one monomer--- (to resolve any indefiniteness by a future review) the examiner will withdraw the indefiniteness rejection over "acrylic based" because then applicants would have clearly defined on record what they mean by that those terms.

Claim 12 can be construed as indefinite because the composition cannot be extruded without the presence of water. It appears applicants claim a dry blend that can later be extruded when water is added but that is not made clear in the claim. A dry blend without water is not extrudable.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

<u>35 USC 102(b)</u>

Claims 12, 14-19, and 22 are anticipated under 35 USC 102(b) over Fukuba et al. '697, Schermann et al. '383, or Dingsoyr '060, McCurrich et al. '480, Australian Patent A-55929/86 (Bell et al.), Kawai et al. '364, Matsuoka et al. '821, Valore '231, Burge et al. '123, Wada et al. '771, or Rirsch et al. '557, Sobolev et al. '289 B2, WO 8600291 (Sandoz), or Fujio et al. (Kao Corporation-JP 06-127992)..

Note: Shin et al. (KR 9508587 abstract) has been withdrawn because they do not teach a sulfonated dispersing agent in applicants' claimed range of 0.05 to 0.5 % by wt of dry solid of cementitious material. The lowest amount for Shin was 0.6% by wt of dry solid of cementitious material.

35 USC 103

Claims 12, 14-19, and 22 are unpatentable under 35 U.S.C. 103(a) over Fukuba et al. '697, Shin et al. (KR 9508587 abstract), Schermann et al. '383, Dingsoyr '060, McCurrich et al. '480, Australian Patent A-55929/86 (Bell et al.), Kawai et al. '364, Matsuoka et al. '821, Valore '231, Burge et al. '123, Wada et al. '771, or Rirsch et al. '557, Sobolev et al. '289 B2, WO 8600291 (Sandoz), or Fujio et al. (Kao Corporation-JP 06-127992) alone or in view of Hayakawa et al. '086, Downing et al. '199, Bobrowski et al. 145, Jungk '505, or Beyn '380.

The cited primary references teach the same components in overlapping amounts as claimed by applicants for their instant invention.

McCurrich et al. '480 teach a pumpable cement composition comprising silica (as in silica sand (see examples) light weight aggregate such as foamed slag, expanded perlite/vermiculite (density modifiers-see col.1, lines58-66 and col.2, line 2), sulphonated melamine formaldehyde, and a viscosity enhancer (gel agent) such as hydroxyethyl cellulose (col.1, lines 39-48) in amounts overlapping applicants' claimed composition. Note that McCurrich bases his amounts of components on the weight percent of the total composition and not based on cement as applicants do for their claims. Even if no explicit teaching of extrudable, this is an intended use. The new use (extrusion) of a known composition is not a patentable distinction. The pumpable McCurrich composition would also be extrudable because it contains the same amounts of the same components and this extrudable property would thus also have been expected.

AU 55929/86 teaches a composition comprising cement, 0.3 to 3 wt% sulfonated melamine formaldehyde (see p.7, line 1 and last paragraph), a water soluble polymer including cellulose ether, alginates, polyvinyl alcohol, etc. (p.8, lines 15-20) in amounts of about 0.01 to about 0.1 wt%. Yet, about permits some tolerance and about 0.1 could potentially read upon 0.3 wt% (applicants lower limit of amount of viscosity enhancer). Further, AU '929 teaches that any amount sufficient to extend effective fluidity may be employed. It is the examiner's position that adding slightly more would have been in the

range of any amount sufficient to extend fluidity which includes applicants lower limit of 0.3 wt%.

Kawai et al. '364 teach a composition comprising cement, sulfonated melamine formaldehyde superplasticizer, segregation control agent (e.g. cellulose), silica fume, aggregate (Table 1 in col.4) in amounts overlapping and thus anticipating applicants' claims (see Kawai claims). Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Matsuoka et al. '821 teach a composition comprising cement, glucan as viscosity enhancer (col.3, lines 40-45) in amounts of 0.01 to 1 wt% (claim 9 in col.8), sulfonated melamine formaldehyde condensate (col.3, lines 50-55) in amounts o f 0.5 to 3.0 wt% (claim 12 in col.8), fly ash, and silica fume (col.2, lines 10-20) thus anticipating applicants' invention. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Valore '231 teaches a composition comprising cement, superplasticizer (e.g. sulfonated melamine formaldehyde-see col.3, lines40-42), thickeners such as cellulose gums guar gum, clays (col.4, last paragraph), and fly ash (claim 9 in col.11). The amounts of superplasticizer/water reducer (synonymous) are 0.2 to 2 wt% and the amount of thickener is 0.01 to 2 wt% (col.7, lines 45-55). Valore thus anticipates applicants' claims. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Burge et al. '123 teach a composition comprising cement, sulfonated melamine formaldehyde condensate in amounts of 0.2 to 5 wt% (col.4, lines 5-10 and col.5, line

29), thixotropic agents (e.g. cellulose ethers-col.4, lines 40-43) in amounts of 0.01 to 10 wt% (col.5, lines 44-45), slag, fly ash, pozzolan, silica fume, etc. thus anticipating applicants' claims. Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Wada et al. '771 teach a composition comprising cement, cellulose (col.4, lines 25-40), polyvinyl alcohol in amounts of 0.l to 10 parts by weight (col.4, lines 40-50) which can be a viscosity enhancer, and a wetting agent or surfactant which is the same as a dispersant (see col.5, lines 1-2). The surfactant is polyethylene glycol ether yet other known conventional surfactants/dispersants may be substituted because they are functionally equivalent such as applicants' melamine formaldehyde condensate (a dispersant is a water reducer is a surfactant is a plasticizer is a superplasticizer-all synonymous terms). Even if not anticipated, overlapping amounts would have been prima facie obvious to one of ordinary skill in the art as would the use of another known and functionally equivalent surfactant/dispersant such as sulfonated melamine formaldehyde.

Rirsch et al. '557 teach a composition comprising cement, cornmix SP2 (melamine formaldehyde sulfonate-col.8, lines 40-50), fibers including PVA fibers which thus also read upon viscosity enhancer (col.6, line 46), aggregate (col.5, lines 25-30), and acrylic polymers and copolymers which also can read upon viscosity enhancer (col.10, lines 53-60). Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Sobolev et al. (US 6,645,289 B2) also appears to teach a cement composition comprising sulfonated dispersant (sulfonated melamine formaldehyde-col.2, line 52), and water soluble polymer such as cellulose, acrylic acid copolymers, polyvinyl alcohol, etc. (see col.3, lines 25-40) and aggregate (col.5, first paragraph) in overlapping amounts. Sobolev et al. further teach this composition has excellent workability and pumpability and can undergo extrusion (see col.5, lines 45-50 and lines 60-65). Even if not anticipated, overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

WO 8600291 (Sandoz) was cited by applicants and it still teaches applicants' claimed invention especially meeting the limitations of claim 12. Note that the amount of 0.2 lignosulfonate meets the requirement of applicants' claimed amounts for sulfonate dispersant and 0.07 wt% cellulose + 0.6 wt% sodium gluconate meet the limitation for viscosity enhancing agent. Notice that applicants do not claim any specific viscosity enhancing aent such as cellulose so it can also read upon the sodium gluconate as a viscosity enhancer.

Fujio et al. (Kao Corporation-JP 06-127992) was prior art cited by applicants and could also have been used in a rejection under 35 USC 103 of applicants' claims as it teaches cement composition for extrusion with an amount of cellulose of 1.0 to 10 wt% and 0.6 to 3.0 wt% sulfonated dispersant. It only differs by 0.1 wt% which would not appear significant since the greater amount still allows for extrudability. While the amount of sulfonated dispersant is only so slightly in excess, it meets applicants functional limitation "wherein the quantity of dispersion agent is sufficient to increase the

efficacy of the viscosity enhancing agent during extrusion of said extrudable cement composition.

Hayakawa et al. '086 has been combined with the primary references to show that it is conventional in the art to add pulp fiber and silica or other aggregate to extrudable compositions (col.4, lines 9-14).

Downing et al. '199 teaches that dispersing agents are the same as plasticizer, superplasticizers, or water reducing aids or agents (col.1, last line and col.2, lines 1-2). Downing teaches that these components are known to be added to cement compositions to improve dispersability and ultimately extrusion (col.2, lines 1-24).

Bobrowski et al. '145 teach adding MELMENT or melamine formaldehyde condensate to cement would have been an obvious design choice for one of ordinary skill in the art because superplasticizers are known to improve flowability of cement and improve pumpability and can be used for complicated form work (col.2, lines 20-36 and 57-59). Extrusion is one example of complicated form work and thus it is an advantageous and obvious design choice to include a superplasticizer to improve flowability, pumpability, and extrudability.

Jungk '505 has been cited to note that it would have been an obvious design choice for one of ordinary skill in the art to use another known surfactant other than such as Wada et al. 771's polyethylene glycol ether. Jungk et al. teach that dispersants (Jungk's so called "binder" is a dispersant and dispersants are surfactants) including polyglycol ether, alkylbenzene *sulfonate,* and melamine formaldehyde condensate are all functionally equivalent dispersants and thus functionally equivalent surfactants (see

col.3, lines 30-49). Beyn '380 similarly teaches that surfactants suitable for combination with thickeners (another name for applicants "viscosity enhancers") include polyglycols an sodium dodecylbenzene sulfonate (see col.6, lines 5-22) and the use of a specific dispersant/surfactant would have been an obvious design choice for one of ordinary skill in the art because they are functionally equivalent.

Response

Provsional ODP:

Applicants argue that the ODP references do not teach that the quantity of dispersing agent is sufficient to increase the efficacy of the viscosity increasing agent during extrusion. The examiner disagrees and notes that one of ordinary skill in the art would have understood the fluidity or flowability of a cement mixture would be improved by adding a dispersant. This is inclusive of whether the mixture is being extruded, pumped, slurried, or any other means of conveyance. The applicants only argue a functional limitation and state that one of ordinary skill in the art would have no understanding that dispersants improve fluidity and flowability of mixtures in a variety of means of conveyance (pumpability, extrusion, etc.).

35 USC 103:

The applicants argue the prior art does not teach the functional limitation "wherein the quantity of dispersion agent is sufficient to increase the efficacy of the viscosity enhancing agent during extrusion..." The examiner disagrees. The prior art teaches the same components (viscosity enhancer and dispersing agent) in the same

amounts and the properties resulting (whether extrudablity, fluidity, flowability, pumpability, etc.) would have been the same.

The applicants argue Fukuba and argue that the ranges do not overlap. Yet, it appears applicants comparison is not an apples to apples comparison but an apples to oranges comparision. The applicants claimed extrudable composition (that contains no water which is necessary for extrusion) contains no water versus, for example, Example 5, Table 5 of Fukuba's composition which does contain water. The applicants compare their own dry blend to a wet blend that already contains water. Removing the water from these examples would place the dry blends of the prior art within the range claimed by applicants for their invention.

Scherrman et al. '383 and Dingsoyr both teach overlapping amounts and since the amounts are the same it as applicants the properties such as extrudability would have been expected to be the same. The examiner disagrees this composition is not extrudable because the applicants' *claimed* composition which contains the same components is extrudable. The same goes for Dingsoyr.

Shah et al. '374 has not been applied in the rejection as applicants state the amount of dispersant/water reducer is outside their claimed ranges (see Table 4).

The applicants argue that Fujio (JP 06-127992) does not teach their water soluble cellulose ether polymers. It would appear that the cellulose powder is still a polymeric material. Further, even if the specific cellulose ether polymers (MC,HMC, or CMC) are not mentioned, applicants are not claiming any of these specific polymers in claim 1. It is improper to argue a limitation not even present in the claim and claim 1

merely states a viscosity enhancing additive of which cellulose powder is one and overlaps applicants amounts. While it is true that the claims may be read in light of the specification, it is improper to read the limitations of the specification into the claims. In re Yamato, 222 USPQ 93; In re Wilson, 149 USPQ 523; Graver Tank v. Linde Air Products Co. 80 USPQ 451 (Supreme Court). The abstract also teaches a water reducing agent including sulfonates that are dispersing agents in applicants' amounts and teaches that this composition is extrudable. It thus meets the applicants' claims.

The applicants state that Sobolev et al. '289 B2 does not relate to extrusion of cement compositions. The examiner disagrees. Applicants are referred to column 5, line 65 which teaches that it *can* be used in an extrusion process.

The applicants argue the alleged new intended use of a known composition. The applicants do not disagree that WO 86/00291 (Sandoz AG) contains the same components in overlapping amounts. A composition which contains the same components in overlapping amounts as applicants would also have been expected to be extrudable because the composition is the same. It is also noted that the new use of a known composition (or alleged new use such as extrusion) is not a patentable distinction if the prior art teaches the claimed composition.

The examiner would rejoin claim 20 should at some future point in prosecution claim 12 be found allowable. Presently, however, the claims remain rejected for the reasons stated above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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